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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,133	12/28/2001	Peter Michael Edic	RD-28,282	1629

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EXAMINER
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KIKNADZE, IRAKLI

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/034,133

Applicant(s)

EDIC ET AL.

Examiner

Irakli Kiknadze

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 06242002. 6) ☒ Other: *IDS filed 02/04/2002*.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12 and 16-18 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. An X-ray source critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

- The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted element is: X-ray source because without source symmetry or asymmetry must be defined with respect to some reference, and a field of view is not a tangible object.

4. Claim 13 recites the limitation " the X-ray source " in line 10. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Lai (US Patent 6,118,841).

With respect to claim 1 Lai teaches a method for arranging detector (35) sections for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry comprising: providing a plurality of detector sections, and arranging the detector sections in an asymmetric arrangement about a central axis of the field of view (see abstract; column 4, lines 16-27; claim 17; Figs. 27 a-b).

With respect to claims 2 and 3, Lai shows that a plurality of detector sections that have substantially equal lengths and adjacent detector sections are positioned apart from each other a distance that is less than the length of the detector sections (Figs. 27 a-b).

With respect to claims 4 and 5, Lai teaches positioning at least one of the detector sections proximate to an edge of the field of view (claim 28).

With respect to claims 6 and 12, Lai teaches a method for arranging detector sections and a detection array (35) for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry comprising: providing a plurality of detector (35) sections that have substantially equal lengths; positioning adjacent detector sections at a distance apart that is less than the length of the detector sections, and arranging the detector sections in an asymmetric arrangement about a central axis of the field of view such that at least one of the detector sections is proximate to an edge of the field of view (Fig. 27a; column 21, line 26 – column 22, line 10).

With respect to claim 7, Lai teaches a detection array (35) for an imaging system that has a field of view that is defined by a rotational axis and imaging geometry, the array (35) comprising a plurality of detector sections arranged asymmetrically about a central axis of the field of view (Fig. 27a; see abstract).

With respect to claims 8 and 9, Lai shows that detector sections have substantially equal length and the adjacent detector sections are apart at the distance that is less than the length of the detector sections (Fig. 27a; column 21, line 26 – column 22, line 10).

With respect to claims 10 and 11, Lai teaches that at least one of the detector sections is proximate to an edge of the field of view (claim 28).

With respect to claim 13, Lai teaches a method for performing a computed tomography scan of an object utilizing an imaging system including a gantry and a rotational axis and imaging geometry that defines a field of view comprising: providing a plurality of detector sections; arranging the detector sections in an asymmetric

arrangement about a central axis of the field of view; collecting data from the detector sections in a first position; rotating the gantry a first angular increment and subsequent increments to alternate positions such that a plurality of specific angular locations are identified during one complete rotation of the x-ray source and detector about the object; collecting data from the detector sections in a plurality of angular positions; and using a reconstruction algorithm to generate a reconstruction of the object using the collected data (claims 17-28).

With respect to claim 14, Lai shows a plurality of detector sections that have substantially equal lengths (Fig.27a).

With respect to claim 15, Lai teaches that collecting data from the detector sections at a plurality of angular positions comprises collecting data from the detector section at each position (claim 28).

With respect to claims 16 and 17, Lai teaches a scanning apparatus comprising: a gantry; an emitter (s) that has a field of view that is defined by a rotational axis and imaging geometry, the emitter secured to the gantry; and an array of detector sections secured to the gantry opposite the emitter (column 1; lines 11-25), the detector sections arranged asymmetric about a central axis of the field of view. A processor configured to collect data from the detector sections (see abstract; Figs. 27a and 28; column 4, lines 17-27; claims 17-28).

With respect to claim 18, Lai teaches a scanning apparatus comprising: a gantry; an emitter (s) that has a field of view that is defined by a rotational axis and imaging geometry, the emitter secured to gantry; an array (35) of detector sections secured to

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the gantry opposite the emitter (column 1; lines 11-25), the detector sections arranged asymmetric about a central axis of the field of view, the detector sections having substantially equal lengths, the detector sections separated by a length that is less than the length of each the individual detector sections; and a processor configured to collect data from said detector sections (see abstract; Figs. 27a and 28; column 4, lines 17-27; claims 17-28).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00- 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Irakli Kiknadze  
January 23, 2004  
IK



**Craig E. Church**  
**Primary Examiner**